

REMARKS

Claims 1 and 3-6 are pending in the application. By this amendment, claims 1 and 3 are amended. Reconsideration in view of the above amendments and following remarks is respectfully requested.

Entry of the Amendment is proper under 37 C.F.R. § 1.116 as the amendments: (a) place the application into condition for allowance for the reasons discussed herein; (b) do not raise any new issues that would require further consideration and/or search as the amendments amplify issues previously discussed throughout prosecution; (c) do not add any new claims without canceling a corresponding number of claims; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are in response to a new ground of rejection entered in the Final Rejection. Entry of the Amendment is thus respectfully requested.

Claim 3 was rejected under 35 U.S.C. § 102(b) over Ohba et al. (USPN 5,656,832). The rejection is respectfully traversed.

Claim 3 recites a group III nitride compound semiconductor device of a successively laminated structure including a substrate, a buffer layer, a first layer of AlGaInN and a second layer of InGaInN. As recited in claim 3, the layers are successive, *i.e.*, the layers follow one another in the order they are recited.

Claim 3 has been amended to further emphasize the above stated features of the present invention. As newly amended, claim 3 now recites that "said buffer layer is disposed between and in direct contact with both said substrate and said first layer, and said first layer is disposed between and in direct contact with both said buffer layer and said second layer." This is supported, for example, in the description of the "fourth embodiment" of the present invention on page 11 of the specification.

Ohba et al. disclose a semiconductor device having successive layers, including a substrate 10, a pair of buffer layers 11 and 12, a GaN gap layer 13, a GaInN defect reducing layer 14, an AlGaInN cladding layer 15, a GaInN active layer 16, an AlGaInN cladding layer 17 and a GaN contact layer 18. Neither buffer layer disclosed by Ohba, therefore, is in direct contact with a GaInN layer, and only one is in direct contact with the substrate. Neither GaInN layer disclosed by Ohba is in direct contact with another GaInN layer or a buffer layer.

There is no disclosure or suggestion by Ohba et al. of a semiconductor device having successive buffer, AlGaInN, and InGaInN layers, in direct contact as recited in amended

claim 3. As discussed above, the successive layers of Ohba et al. are buffer layers 11 and 12, GaN layer 13, GaInN layer 14, and AlGaInN layer 15. In other words, the GaInN layer 14 of Ohba et al. does not follow, *i.e.*, is not successive with, the AlGaInN layer 15, it precedes it. Accordingly, Ohba et al. cannot anticipate or render obvious claim 3.

Applicant respectfully requests that the rejection of claim 3 be withdrawn.

Claim 1 was rejected under 35 U.S.C. § 103(a) over Edmond et al. (USPN 5,523,589) in view of Schetzina (USPN 6,046,464).

The rejection is respectfully traversed.

Edmond et al. disclose a light emitting diode 20 that includes a substrate 21, a buffer layer 23, a GaN layer 27, an InGaN active layer 25, and another GaN layer 26. Schetzina discloses a linearly graded layer of InGaN. With reference to Figure 9 of Schetzina, it can be seen that the graded layer of InGaN 122b of Schetzina is between a GaN layer 1146 and an InGaN layer 1246. Claim 1, however, recites that the composition ratio of In is changed continuously or intermittently between a first layer of InGaN and a second layer of InGaN, not between a layer of GaN and a layer of InGaN, as shown by Schetzina.

Further, claim 1 has been amended to recite a semiconductor device having a buffer layer and two successive InGaN layers, with one of said InGaN layers being disposed between and in direct contact with both said buffer layer and the other said InGaN layer. This is supported, for example, in the description of the "first embodiment" of the invention on page 7 of the specification. Neither Edward nor Schetzina disclose such a structure. Accordingly, even assuming it would have been obvious to combine Edward et al. and Schetzina, such a combination would not have resulted in the invention of claims.

Applicant respectfully requests that the rejection of claim 1, under 35 U.S.C. § 103(a), be withdrawn.

Claims 4-6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohba et al. in view of Duggan (USPN 6,072,189). The rejection is respectfully traversed.

Claims 4-6 recite additional features of the invention and are allowable for the reasons discussed above with respect to claim 3 and for the additional features recited therein. It is also respectfully submitted that Duggan fails to cure the deficiencies of Ohba et al. with respect to claim 3 and even assuming it would have been obvious to combine Ohba et al. and Duggan, such a combination would not have resulted in the invention of claim 3.

Applicant respectfully requests that the rejection of claims 4-6 under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

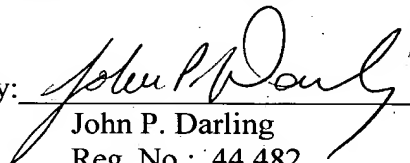
In view of the foregoing, the claims are in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached Appendix is captioned **"Version with markings to show changes made"**.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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Enclosure: Appendix